[0151] The controller **140** may generate the dimming signal on the basis of brightness information of the external image signal received by the display apparatus **1** (S**110**). The dimming signal generated by the controller **140** may denote an electrical signal capable of controlling the BLU **50** of the display apparatus **1** according to the degree of brightness and darkness (i.e., a contrast ratio) of the image.

[0152] In addition, the dimming signal generated by the controller **140** may denote an electrical signal capable of adjusting brightness of the external lighting device **1000** in proportion to brightness of the image signal generated by the display apparatus **1**.

[0153] The transmitter **111** contained in the communicator **110** may transmit the dimming signal generated by the controller **140** to the external lighting device **1000** (S**120**). In this case, the dimming signal may be transmitted to the external lighting device **1000** according to the wired or wireless communication scheme.

[0154] The intensity of current flowing in the BLU **50** may be adjusted according to the dimming signal generated by the controller **140**, such that brightness of the image displayed on the display apparatus **1** may be adjusted (S**135**).

[0155] Brightness of the external lighting device **1000** may be adjusted on the basis of the dimming signal transferred from the display apparatus **1** to the external lighting device **1000** (S**130**), and brightness of the external lighting device **1000** may be changed in proportion to brightness of the image displayed on the display apparatus **1**, such that the user who views the image displayed on the display apparatus **1** may view a high-definition image without experiencing eye fatigue caused by influence of the external lighting device **1000**.

[0156] Referring to FIG. **14**, the communicator **110** of the display apparatus **1** may receive the image signal needed for image display from the external device **1010** or **1020** (S**200**). The received image signal may be transmitted to the controller **140**. In this case, the image signal received from the external device **1010** or **1020** may include brightness information of the image.

[0157] The controller **140** may generate the dimming signal on the basis of brightness information of the image signal transferred from the external devices **1010** and **1020** to the display apparatus **1** (S**210**). The dimming signal generated by the controller **140** may denote an electrical signal capable of adjusting brightness of the output images of the external devices **1010** and **1020** according to brightness information of the image signals received from the external devices **1010** and **1020**.

[0158] The transmitter **111** contained in the communicator **110** may transmit the dimming signal generated by the controller **140** to the external devices **1010** and **1020** (S**220**). Simultaneously with the above-mentioned situation, the transmitter **111** may also transmit the dimming signal to the external lighting device **1000** (S**225**). In this case, the dimming signal may be transmitted to the external lighting device **1000** according to the wired or wireless communication scheme.

[0159] Brightness of the images displayed on the external devices **1010** and **1020** may be adjusted on the basis of the dimming signal generated by the controller **140** (S**230**), and at the same time brightness of the external lighting device **1000** may be adjusted (S**235**). That is, the controller **140** of the display apparatus **1** may generate the dimming signal for adjusting brightness of the output images of the external devices **1010** and **1020** on the basis of the image signals of the external devices **1010** and **1020**, such that the controller **140** may control brightness of the external lighting device **1000** using the generated dimming signal.

[0160] Therefore, since brightness of the external lighting device **100** may be changed according to brightness of the images displayed on the external devices **1010** and **1020**, the user who views the images displayed on the external devices **1010** and **1020** may view high-definition images without experiencing eye fatigue caused by influence of the external lighting device **1000**.

[0161] The above-described exemplary embodiments are merely exemplary.

[0162] As is apparent from the above description, the display apparatus and the method for controlling the same according to exemplary embodiments can be interoperable with illumination control of an external lighting device using the dimming control technology of the display apparatus, such that images displayed on the display apparatus are not dependent upon illumination of the external lighting device, resulting in implementation of an optimum image display environment.

[0163] The display apparatus may perform dimming control of brightness of images displayed on the external device, such that an optimum image display environment can be implemented in all the external devices contained in the environment including the display apparatus.

[0164] Although one or more exemplary embodiments have been shown and described, it should be appreciated by those skilled in the art that changes may be made in the exemplary embodiments without departing from the principles and spirit of the disclosure, the scope of which is defined in the claims and their equivalents.

What is claimed is:

1. A display apparatus comprising:

a display configured to display an image;

a controller configured to generate a dimming signal for adjusting a brightness of an external lighting device based on a brightness of an image signal outputted from the display apparatus; and

a communicator configured to transmit the dimming signal to the external lighting device to adjust the brightness of the external lighting device based on the generated dimming signal.

2. The display apparatus according to claim **1**, wherein the controller is configured to generate a dimming signal for adjusting the brightness of the external lighting device in proportion to the brightness of the image signal outputted from the display apparatus.

3. The display apparatus according to claim **1**, wherein the controller is configured to generate a dimming signal for adjusting a brightness of an image outputted from an external device based on a brightness of the image signal outputted from the external device.

4. The display apparatus according to claim **1**, wherein the controller is configured to generate a dimming signal for adjusting the brightness of the external lighting device based on a brightness of an image signal outputted from an external device.

5. The display apparatus according to claim **3**, wherein the controller is configured to generate a dimming signal for adjusting the brightness of the image outputted from the external device in proportion to the brightness of the image signal outputted from the external device.